

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>W1.2036PCT</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/050658</b>	International filing date ( <i>day/month/year</i> ) <b>30.04.2004</b>	Priority date ( <i>day/month/year</i> ) <b>02.05.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>KOENIG &amp; BAUER AKTIENGESELLSCHAFT</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
- a. ☒ (sent to the applicant and to the International Bureau) a total of 9 sheets, as follows:
- ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
- b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:
- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/050658

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-14 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-50 \_\_\_\_\_ received by this Authority on 01.07.2005 with
- nos.\* \_\_\_\_\_ received by this Authority on telefax
- ☒ the drawings:
- sheets 1/1 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/050658

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-50	YES
	Claims		NO
Inventive step (IS)	Claims	1-50	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-50	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

This report makes reference to the following documents:

D1: US-A-6 050 192 (GEISSLER WOFLGANG ET AL)  
18 April 2000 (2000-04-18)

D4: WO 95/31333 A (ADVANCED VISION TECH LTD;  
GOLDSTEIN MICHAEL D (IL) 23 November  
1995 (1995-11-23)

1. A device for controlling at least one register in a printing machine with at least one printing unit, at least one printing cylinder, one transfer cylinder and one impression cylinder, an image sensor recording an image from a print substrate imprinted with color ink in the printing unit and evaluating the image in an evaluating unit, the evaluating unit generating an actuating command for an actuating drive for controlling the register from a comparison of data that correlates to an image currently recorded during a printing machine production run to data from a previously generated image, the evaluating unit using the data

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

from the currently recorded image to divide it into color separations (CMYK).

Therefore, the subject matter of claim 1 differs from the known device in that:

- the evaluating unit carries out a relative position determination for a color separation carried out based on data from the currently recorded image in relation to a reference color separation carried out based on the data from the previously generated image, and
- the printing cylinder has a drive that can be controlled or regulated separately from the impression cylinder associated therewith,
- the data from the previously generated image correlating with an image generated in a pre-press stage upstream from the printing machine.

2. D1 is regarded as the prior art closest to the subject matter of claim 3. It discloses (the reference signs in parentheses refer to D1):

a device for controlling at least one register and a color density in a printing machine having at least one printing unit with at least one transfer cylinder and one impression cylinder

- an image sensor recording an image from a print substrate imprinted with color ink in the printing unit and transmitting the data

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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correlating to the image to an evaluating unit,

- the evaluating unit generating an actuating command for an actuating drive for controlling the supply of color ink and an actuating command for a drive for controlling the register, based on a comparison of data from an image recorded during a printing machine production run to data from a previously generated image,
- the evaluating unit using the data from the currently recorded image to divide it into color separations (CMYK).

Therefore, the subject matter of claim 3 differs from the known device in that:

- the evaluating unit carries out a relative position determination for a color separation carried out based on data from the currently recorded image in relation to a reference color separation carried out based on the data from the previously generated image, and
- the evaluating unit converts the positional differences between the color separation carried out based on the data from the currently recorded image and that based on the data from the previously generated image which were determined using a relative position determination, in the direction of conveyance of the print substrate and/or transverse to the direction of conveyance of the print substrate, into an actuating

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command for an actuating drive for  
controlling the register and into an  
actuating command for an actuating drive for  
controlling the supply of color ink.

The objective problem solved by these distinguishing features (see points 1 and 2) is that of improving a device for controlling at least one register in a printing machine, for which register marks applied to the print substrate for controlling the color density and checking register maintenance are not required, such that greater production quality is achieved throughout the entire printing process.

The cited documents D1 to D4 contain nothing that would prompt a person skilled in the art to arrive at the problem to be solved or its the corresponding solution. Therefore, the subject matter of claims 1 and 3 of the present application involves an inventive step (PCT Article 33(3)).

3. Claims 2 and 4 to 51 are dependent on claim 1 or claim 3 and therefore likewise meet the PCT requirements (PCT Article 33(1)).